

РКОАТОМ «Атомная стратегия» 12 номеров «Кенедельник чатомная стратегия» 12 номеров «Атомеров»



om. 26 years with the nuclear industry! Friday, September 30

[28/10/2011] TSAR-BOMB IS 50

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A.V. Veselovsky, honorary veteran of the RFNC-VNIIEF, head of the scientific and testing department (in 1956-2009), laureate of the USSR State Prize

The A6027 charge was tested on October 30, 1961 at the Novaya Zemlya test site. The superbomb was developed and manufactured in record time in two copies: a control product (for the dress rehearsal of the aircraft crew, measuring systems of the test site) and its combat version. Realizing that testing a superbomb would worsen the ecological state of the northern regions, primarily the Scandinavian countries, it was proposed to test a charge that in a "clean" version is 50% of the maximum power (i.e. 50 Mt).



The purpose of the super bomb

The creation of nuclear weapons by the Soviet Union, despite the hardships of the post-war period, has become an effective factor in deterring any aggressors from launching new global wars. Realizing that the arms race to achieve nuclear parity with the US and NATO would require huge material costs and create an increased threat of new wars, the USSR from 1946 fought for its complete ban. But, having a monopoly on nuclear weapons (NW), the United States did not go for it.

In 1949, after testing the first atomic bomb, RDS-1, in the USSR, the USSR proposed a moratorium on full-scale nuclear testing as a palliative. However, these proposals were also rejected by the United States. The moratorium on nuclear testing proclaimed by the Soviet Union in 1958 was finally heard by the West. And in 1959, 1960. nuclear weapons tests were not carried out. But it became known from intelligence that the United States was intensively developing new types of nuclear weapons and was ready to test them in 1961. The top leadership of the USSR, together with atomic scientists, understood that some kind of push was needed in order to intensify disarmament negotiations.

The young theoretical physicist Yu.A. Trutnev proposed the idea of creating a 100 Mt superbomb, which could frighten foreign skeptics who believed that Soviet nuclear scientists were significantly weaker than American ones. The idea was supported by Academicians A.D. Sakharov, Yu.B. Khariton and Ya.B. Zeldovich. The top leadership of the country, having agreed on the issue with scientists, decided to create and test super-powerful weapons. The final decision to resume nuclear testing and create a superbomb was made in July 1961, when the scientific leadership of KB-11 (VNIIEF) reported to N.S. Khrushchev on the possibility of developing a hydrogen bomb with a capacity of 100 million tons of TNT.

Prehistory of the development of high-power nuclear weapons

When creating the first thermonuclear charge in KB-11 in two versions:

- RDS-6T ("pipe"), headed by Ya.B. Zeldovich;
- RDS-6S ("puff"), headed by A.D. Sakharov

(see "Real Hydrogen", "Atomic Strategy" No. 48, October 2010) a "repair option" was also envisaged - the creation of an atomic bomb with a capacity of 300 kt, which was carried out by E.I. Zababakhin.

The development of the RDS-6T was considered unpromising, and the successful testing of the RDS-6S on August 12, 1953 buried the continuation of work on the "repair option".

1955, by decision of the Government, a second nuclear center was established - NII-1011 (RFNC-VNIITF) in Chelyabinsk-70 (now Snezhinsk), where a third of the employees of KB-11 were transferred. The subject matter was the same. The new nuclear center had to prove itself somehow. This is probably why the initiative was proposed to develop a superbomb with a capacity of 30 Mt (such a capacity was



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Cooperation

The editors invite regional representatives of the Atomnaya Strategy magazine and the proatom.ru website. E-mail: pr@proatom.ru Savichev Vladimir.



possessed by the first thermonuclear device "Michael" of the United States, tested in 1952 on the Bikini Atoll). The R202E charge turned out to be much larger in size and weight than RDS-6S, RDS-37. It required the development of a new ballistic bomb body and a powerful parachute system capable of slowing down the descent of a bomb after being dropped from an aircraft to a "critical altitude" (air burst height) so that the carrier aircraft could retire to a safe distance.

The dimensions of the bomb turned out to be so large that it was not allowed to hang it even on the largest strategic aviation bomber - the TU-95. In agreement with the Tupolev company, one sample of TU-95 was finalized, which was assigned the index TU-95-202. This model with an external bomb suspension (instead of the bomb bay, a large extrusion with powerful bomb racks was made from the bottom of the fuselage) was intended for testing aerodynamics, ballistics of an air bomb and a unique parachute system (development of the Research Institute of Airborne Equipment MAP). Mining was carried out by the forces of NII-1011 and 71 Air Force training grounds (Bagerovo station, Crimean region).

Things did not come to full-scale tests, apparently, for three reasons:

- there was a moratorium on nuclear testing;

- a bomber with an external suspension of aerial bombs significantly lost speed and maneuverability and could become an excellent target for the air defense of a potential enemy;

- at the initial stage of the NII-1011 work, there were many serious blunders and even failures during the nuclear explosion.

Most likely, further work was recognized as unpromising and suspended.

Creation of the AN602 Tsar Bomb

After the adoption of the decree of the Government of the USSR on the resumption of testing of nuclear weapons in July 1961, KB-11 began emergency work on the development, theoretical justification and preparation for testing not only superbombs, but also a series of other nuclear weapons. Particular attention, of course, was paid to the heavy-duty bomb.

Even before this decision, the theoretical physicists of KB-11 were distributed to develop "their" charges. Therefore, to develop a superbomb, it was decided to call Dr. Adamsky V.B., by connecting to it a theoretical physicist - a recent graduate of MEPhI Smirnov Yu.N., as well as the initiators of the creation of the superbomb, Ph.D. Trutneva Yu.A. and Ph.D. Babaeva Yu.N. Academician Sakharov A.D. took over the development leadership.



The situation was aggravated by the tight deadlines for the start of tests (09/01/1961), the lack of a computer park for carrying out the proper number of calculations. I had to use all the computers of the Mathematical Institute of the USSR Academy of Sciences (mathematicians at KB-11 worked there at night and on weekends). And only on October 24 (6 days before the tests) was the final report on the design of the bomb and the theoretical justification completed. But even then A.D. Sakharov (already without a computer) additionally worked out the necessary improvements.

The task of designing the bomb body and its parachute system was greatly facilitated for KB-11 due to the fact that this work had already been completed by NII-1011 (for the "202" product). The dimensions of the bomb and the parachute system turned out to be very impressive:

the bomb itself: length - 8.5 m; diameter - 2 m;

parachute system: pilot parachute - 0.5 m², braking parachutes, deployed sequentially: one - 5 m², three - 5 m² each, one - 40 m², three - 40 m² each, main - 1600 m².

The delegation of KB-11, headed by director B.G. Muzrukov, twice Hero of Socialist Labor, went to Chelyabinsk-70, where 6 bomb cases were found in warehouses. The Moscow NII-PDS started urgent production of unique parachutes.

The unique TU-95-202 aircraft at the strategic long-range aviation airfield in Engels had already been written off as unnecessary and was subject to disposal. I had to take urgent action. From the decommissioned category, the aircraft was returned to service, the engines were replaced, a complete revision of the power structures, electrical and radio equipment was carried out, repair and restoration

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work was carried out, after which it became as good as new. After carrying out training flights on it, a conclusion was issued by the Design Bureau of A.N. Tupolev on its suitability for combat work.

Since there were no overhead cranes with a lifting capacity of 30 tons at the KB-11 pilot plant, it was decided to assemble the product in a collapsible freight car RK-7. A brick-reinforced concrete extension was urgently completed to the assembly shop and a railway line was connected. A huge extension was done in 2 weeks. It was unrealistic to bring heating mains in such a period. They were heated with electric heaters and fans.

A large number of serious innovations were applied in the design of the superbomb itself and its charge. A powerful thermonuclear charge was made according to a "bifilar" scheme: for radiation implosion of the main thermonuclear unit, two thermonuclear charges were placed on both sides (front and rear) to ensure synchronous (with a time difference of no more than 0.1 μ s) ignition of thermonuclear "fuel". KB-25 (VNIIA) finalized a serial detonation automation unit for this charge.

It seemed to A.D. Sakharov that the calculations carried out on a computer were not enough.

"2 days before the product was sent to the test site at 8 pm, Sakharov came to the workshop, approached the product (the body of the bomb was open and access to the charge was provided from both sides). Andrei Dmitrievich looked inside, felt the construction, then sat down on a chair in the corner and thought in the pose of Rodin's The Thinker. So he sat until 12 at night, then asked for a sheet of clean paper. Since there was no paper in the workshop, they offered him a blank sheet of plywood.

On this plywood, the academician drew a sketch, where it was proposed to install lead belts 60 mm thick from the side of the initiator charges on the inner conical surface of the charge body. I call the director of KB-11 B.G. Muzrukov at one in the morning: "What should I do, after 36 hours, sending?" Answer: "Do as Sakharov said!" At 6.00 in the morning, the designers draw "squirrels" in the shop and after 4 hours the lead belts are ready (from the memoirs of the head of the assembly shop of the KB-11 plant A.G. Ovsyannikov).

40 years later, when, on the instructions of the director and first deputy scientific director of VNIIEF, Academician of the Russian Academy of Sciences Ilkaev R.I. In the most powerful computer center in Russia, VNIIEF, the calculations for the three-dimensional problem "Mimosa" were checked, it was confirmed that the absence of these lead belts would lead to a significant distortion of the radiation implosion sphere and a decrease in the explosion power by ~ 80%. So the thought of the academician turned out to be much more perfect than computers available at that time.

Works at the landfill

Large preparatory work was also carried out at the test site for testing the superbomb. The bridge crane in the DAF building (Dukhov, Alferov, Flerov), designed for 30 tons of cargo, had a wider span, therefore, during the construction of the DAF structure, an extra piece was cut out of the main load-bearing structure of the crane bridge, and the structure was re-welded. I had to urgently resolve the issue of static and dynamic tests of the crane. The crane was tested for a maximum of 20 tons. For previous work, this was enough.

At the Olenegorsk Mining and Processing Plant, a T-34 tank (without a turret) weighing 30 tons was found, which was used as a powerful tractor. With additional 7.5 t pigs, it was used as a crane test load. The ends of a cable as thick as an arm were laid on the floor. On the sides of the car, 4 railway sleepers were fixed so that the cable would not fray. Only a commission from the testing management, Goskotlonadzor, and safety engineering remained in the hall. Crane operator Sasha Kochetov was blessed to rise. He risked the most while in his booth 6 meters from the floor. In a tense silence, the rise began, the electric motors roared strainedly, lifting 37.5 tons. Suddenly a shot, followed by a second - the commission from the hall was blown away by the wind. It turned out that the sleepers, pinched by steel cables, burst like matches. The crane passed the test, and Kochetov, smiling,

Finally, the superbomb train arrived at the unloading station. Since the polar night had already begun in the Arctic, and according to the requirements of the regime, it was necessary to unload at night, and due to safety conditions, a good overview was required, the unloading object had to be well lit. In addition, filmmakers arrived from Mosnauchfilm to film the test preparation technology. Therefore, the place of unloading was brightly lit by "jupiters".

The unloading ramp, located below, presented an excellent panorama for observation from the village of Vysokoe, standing on a hill. Therefore, the regime officials did not come up with anything better than how to send a soldier to each apartment to control that no one approached the curtained windows.

The super-bomb on a powerful lodgement, a metal frame, was dragged onto a large multi-wheeled trailer and delivered by a KrAZ tractor to the DAF assembly hall. The top feather of the bomb stabilizer was installed directly under the aircraft. Otherwise, the "cargo" did not pass through the gate and did not fit into the railway gauge of the T1 car. When removing the bomb from the trailer, a new surprise awaited. A traverse with rigid rods, weighing 600 kg (designed by NII-1011) was borrowed, it was developed for the RN202 product. The alignment of the AN602 turned out to be different. V.P. Buyanov resolves the issue promptly: he folds 2 braided cables with a diameter of 10-12 mm into 8 threads each, and thus two rods are lengthened by 450 mm. The safety representative who refused to work with such an "addition" is removed from the hall. Superbomb rises 100-150 mm,

The next day, according to the sketches of the head of the design department I.I. Kalashnikov at the Olenegorsk Mining and Processing Plant, rigid extension adapters were manufactured and tested. Lift issues have been resolved. Intensive preparation of the superbomb itself began. The work was added, since in order not to supercool the charge with an external suspension, it was necessary to mount a fiberglass "fur coat" with an electric heating and temperature control system on the inner surface of the ballistic hull.

A cargo parachute weighing 1846 kg, located in a cylindrical glass in the tail section of the hull, was also a unique device. After pulling out the parachute checks when the bomb was detached from the carrier

aircraft and the time delay *of* the opening machine, an exhaust parachute with an area of 0.5 m 2 was fired and then a parachute of 5 m 2 , three parachutes of 6 m 2 , then three parachutes of 40 m

and, finally, the main parachute at 1600 m

Paratroopers from the Research Institute of PDS joked that from the cloth of this parachute, all women of Arzamas-16 could be sewn into an elegant blouse. At the end of the tests, I received a canvas bag from this parachute as a gift from the PDS Research Institute. It turned out to be an awning cover for my Vola.

The preparations were obviously hindered by the "filmmakers" (when they turned on five "Jupiters" of 5-8 kW each - the crane could no longer work), who tried to film us, and we tried to dodge so as not to get into this ambiguous film document. We were dressed in white coats and doctor's caps, then the caps were removed, as it began to look like a hospital. Filming continued at the airport. The youngest operator was put on the plane to the blister shooters with a movie camera. His task was to shoot the release of a super-bomb and to train shooters from the crew of the aircraft, since "strangers" were not allowed on board the aircraft.

I inquired about the purpose of filming the film from the deputy head of the 2nd Main Directorate of the MSM, Lieutenant Colonel of the KGB G.I. Dorogov, expressing doubt that, despite the historical value, no one will see him because of the high secrecy. To which he replied: "In addition to historical, there is also political value. In diplomatic negotiations, especially with third world countries, when their leaders show obvious intractability, a rather harmless but cunning move is used ... nuclear weapons. Diplomats then silently sign agreements that are beneficial to the USSR. So, when Shahinshah of Iran Reza Pahlavi visited Moscow, a film was shown about testing the first Soviet "hydrogen".

Finally, the huge TU-95 bomber, whose fuselage slenderness was disturbed by a bomb protruding from below, takes a long and straining run and takes off heavily at the end of the runway (the flight weight of the product was 26.5 tons). The test of the control product was successful: all aircraft systems, superbombs, measuring systems of the test site worked normally, and even filming was a success.

To prepare for the testing of the combat product (on the second day after the control one), the high authorities arrived: Commander-in-Chief of the Strategic Missile Forces Marshal of the Soviet Union Kirill Semenovich Moskalenko, appointed after the death of marshals M.I. Nedelin, and then S.S. Biryuzova (died in a plane crash over the territory of Yugoslavia), and the Minister of Medium Machine Building Efim Pavlovich Slavsky.

The legendary marshal turned out to be small in stature and frail in build. Outwardly, he somehow resembled Generalissimo A.V. Suvorov. He was struck by his childish, weak and very cold hands. After getting acquainted with the technique, the report of leading experts, the marshal wished to talk with the commander of the TU-95 crew, Major A.E. Durnovtsev. He asked the pilot about his readiness to carry out such an honorable and responsible task, and asked why the crew commander was still a major at the age of 40. Despite the fact that according to the state the commander of a long-range bomber squadron is a major, K.S. Moskalenko ordered the adjutant to send a cipher to the Minister of Defense about the early assignment of the next military rank to Durnovtsev. For the successful completion of the Soviet Union and extraordinary military ranks without encryption. So, within a week, Major Durnovtsev became a colonel.

In the film, we starred with beards that we swore not to shave off until the end of the test. And these Fidelian beards aroused irony in the minister E.P. Slavsky. A large group of theoretical physicists arrived with Slavsky. They were amazed by the size of the superbomb. They asked for souvenirs: who got the nuts, who got the studs. In agreement with the military representative, I unscrewed the nameplate from the charge, which is still kept in my home museum. E.P. Slavsky flew to Novaya Zemlya to see the trials with his own eyes.

The preparation of the combat product passed without deviations according to the technology worked out on the control product. The transfer of charges to combat readiness (equipment with detonators), as a very responsible and dangerous operation, I carried out myself. Before equipping the product, E.A. Negin said that he would equip. Having mustered up the impudence, I asked if he had a "book of explosives", to which Yevgeny Arkadyevich, measuring me with a contemptuous look, replied that he was engaged in explosive work when I was still walking under the table. He equipped skillfully, but somewhat casually, which, apparently, was the special chic of a real explosive.

At the airfield, after a troublesome suspension, installation of the upper stabilizer feather and entering the flight task into automation, I went to sign papers to E.A. Negin and N.I. Pavlov. After the signing, General N.I. Pavlov asked me to give him the keys to the electric lock of the superbomb. I gave one set to him, left a double for myself, to which E.A. Negina: "Don't show off, Anatoly Vasilyevich, let's have a second pair!" I had to give a second pair of keys. I thought to myself that I have a better souvenir - a nameplate from a charge.

The plane took off safely and went on a combat course. By the time it returned, we already knew that an explosion of unprecedented power had taken place, a nuclear mushroom had risen into the stratosphere to a height of 67 km, and the carrier aircraft had not received any off-design impacts. Everyone congratulated each other. Particularly pleased was Oleg Ivanovich Volkov, deputy director of the NII PDS, who was very worried about his unique parachute system. He admitted that there was less anxiety during the descent of space objects, since there the degree of development was much higher and the reliability was confirmed by a large number of experiments.

The report of the crew of the state commission was received with triumph. General N.I. Pavlov hugged each member of the crew and congratulated them on their success. After the success report to the highest authorities: the Central Committee of the CPSU, the Government and the Minister of Defense, the test management left for the hotel. We continued to work. Suddenly, A.D. Sakharov called on the HF device: "Hello, Sakharov says. Could you please tell me the test results of the 602?" I knew that the TNT equivalent was already estimated at about 50 Mt, but since we were constantly told that this was information of "special importance", I tried to avoid a direct answer, saying that the equivalent was higher than the calculated one. To which the answer was: "Thank you, that's enough for me." In the evening, theoretical physicists arranged a reception at the "general's" hotel, where V.P. Buyanov and me. The banquet was solemn: N.I. Pavlov congratulated everyone on their great success on behalf of N.S. Khrushchev, the Central Committee of the CPSU and the Government and wished him further creative success. The official part was followed by an unofficial one, in which "cunning" theoretical physicists beat E.A. Negina in preference.

Homeland awards

At the end of the tests, a specially ordered IL-18 aircraft took us to Moscow; from Moscow to Sarov they traveled by their plane. We were met at our home airport by a delegation headed by the director of the institute B.G. Muzrukov, the first secretary of the CC CPSU A.S. Silkin, and representatives of the city authorities. They shook hands with us, thanked us, only the guard of honor and the brass band were missing. We were pleasantly surprised by such attention of the management, stingy with fanfare.

NS Khrushchev reported to the 22nd Congress of the CPSU: "I want to say that we are also very successful in testing new nuclear weapons. We will complete these tests soon. Apparently at the end of October. In conclusion, we will probably detonate a hydrogen bomb with a capacity of 50 million tons of TNT. We said that we have a bomb of 100 million tons of TNT. And that's right. But we will not detonate such a bomb, because if we detonate it even in the most remote places, then even then we can smash our windows. Therefore, we are holding back for the time being and will not detonate this bomb. But by detonating a 50-megaton bomb, we will thereby test a device for detonating a 100-megaton bomb.

However, as was said before, God grant that we never have to explode these bombs over any territory. This is the biggest dream of our life!".

At the beginning of 1962, a "starfall" hit the workers of the MSM: in the central newspapers, the pages were full of notes about the testers. In Pravda, a small but very significant note for us, "Awards to the heroes of the atom", appeared.

"For the great merits achieved in the development of the nuclear industry, science and technology, the development, improvement and testing of new models of powerful thermonuclear weapons, the Presidium of the Supreme Soviet of the USSR awarded especially distinguished workers - twice Herces of Socialist Labor - with the third gold medal "Hammer and Sickle", awarded the title "Hero of the Soviet Union" to a group of officers of the missile forces and aviation, the title "Hero of Socialist Labor" - to 26 leading designers, scientists, engineers and workers, awarded orders and medals of the USSR to more than 7 thousand workers, designers, scientists, managers, engineering and technical workers and military personnel of the Rocket Forces, the Air Force and the Navy, awarded the Order of Lenin to a number of research and design institutes and factories.For special merits in fulfilling the task of the party and government on the development and improvement of thermonuclear weapons and success in the development of atomic science and technology, the Council of Ministers of the USSR expressed gratitude to a group of leading scientists and designers - Heroes of Socialist Labor, laureates of the Lenin Prize.

By the birthday of V.I. Lenin, a group of our leading specialists were awarded the high titles of laureates of the Lenin Prize. In KB-11, ten people were awarded the title of Hero of Socialist Labor, A.D. Sakharov received the third star of the Hero, Yu.B. Khariton and Ya.B. Zeldovich - already three times Heroes of Socialist Labor - received personal thanks from the Government of the USSR. Among our employees of the second thematic direction (KB-2), the title of Lenin Prize winner was awarded to First Deputy Chief Designer Yuri Valentinovich Mirokhin, Deputy Head of the Design Department Alexander Ivanovich Yanov and my direct supervisor and teacher, Deputy Head of the Testing Department Vladimir Petrovich Buyanov. Among others, I received my first order - the Order of the Red Banner of Labor, which was presented by our first head of the facility,

The Significance of the Superbomb Tests

In the history of Russia, a certain pattern has been noticed in the creation of hypertrophied samples of unique products: the Tsar Bell (which did not ring), the Tsar Cannon (which did not shoot) and, finally, the Tsar Bomba (which was blown up with some excess of the calculated power - 52.5 Mt).

This record explosion marked the culmination of the Cold War era. As expected, the huge explosion caused alarm around the world. Particular indignation was expressed by the Scandinavian countries located in the immediate vicinity of Novaya Zemlya. US nuclear scientists were surprised that the superbomb turned out to be extremely "clean" - only about 2 percent of the energy of the explosion came from the fission reaction, the rest of the energy from the fusion reaction, which does not create an additional radiation background. Speaking at the XXII Congress of the CPSU, N.S. Khrushchev said: "We are proud of our comrades, we pay tribute to them, we rejoice at their creative successes, which contribute to strengthening the defense power of our Motherland, strengthening peace throughout the world." These tests made it possible in 1963 in Moscow to sign the "Treaty on the Prohibition of Tests of Nuclear Weapons in the Atmosphere, in outer space and over water" between the leading nuclear powers: the USSR, the USA, Great Britain. Subsequently, other countries joined them.

This event was welcomed by the whole world. The Moscow Treaty was a significant step in improving and improving the ecological situation on our planet. The USSR continued to fight for a complete ban on nuclear tests (underground), and in 1990 such an agreement was adopted.

The creation and testing of the most powerful thermonuclear charge in the world with a capacity of 50 Mt served as an impetus for reducing the arms race throughout the world. And this is the great merit of our outstanding nuclear scientists.



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comment Thank you for your interest

Re: TSAR-BOMB 50 YEARS (Total: 0)

by Guest on 28/10/2011

Great deeds of great people! Tsar bomb is the guarantor of peace! 30,10,61 was a victory comparable to the victory in the Second World War. It is a pity that today's bastards in power only squander and sell cheaply the conquests and victories of those great people - the Soviet people. And they call themselves Russians!

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 02/11/2011 Russians live in Russia, and Russians rule them. (L.Shebarshin)

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 29/10/2011 Where can I watch a movie about this test?

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 31/10/2011 Once I was at a military training camp for reservists at the Pushkin Submarine School, in the year 79-80 I saw this film. Impressive.

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 31/10/2011 here

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 31/10/2011

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 29/10/2011

, yes ...

Managers can't do that, they are rather weak in what they do, but they are rednecks for money ... you can't do it with such new technologies ...

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 31/10/2011

Here they are in the photo, our relatives, Dr. Mengele, Bokassy, potential killers of millions of people. And what? Hey, follow orders.

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0)

by Guest on 31/10/2011 Stop talking about "potential killers of millions of people." Leave this liberal nonsense for your overseas masters. Soviet scientists defended their Motherland and won at that stage of the Cold War.

Turbinist

[Reply to this]

Re: Minescence (Total: 0) by Guest on 31/10/2011 "We do not plow, we do not sow, we do not build, We are proud of the social system ..."

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 01/11/2011 The Soviet Union did not drop bombs on people. But your masters - dumped. Dresden - 200,000? (carrying out comparative tests to evaluate the effectiveness of atomic weapons) Hiroshima - 150,000? Nagasaki - 80,000? So Mengele, Bokassa is Truman, Teller, Openheimer.

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 01/11/2011 The Jews climbed the anniversary of our great victory to crap! Get out of the Jews! In hell with the devils your place!

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 01/11/2011 " *Why is there no anti-Semitism in England* ?" - And we do not consider Jews smarter than ourselves. (Winston Churchill)

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 02/11/2011

We do not measure pussy, just the Jews below us in moral character!

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0)

by Guest on 02/11/2011

Well, you illiterates, stop inciting ethnic hatred here. All nations have both good and bad people. For example, I try never to get involved in business and services with Russians. I know that there is theft, drunkenness, scam and banal laziness. Nobody tried to invite Russians to repair an apartment or work in a country house? And don't try. Better - Kyrgyz, Tajiks, Uzbeks. They will do it quickly and responsibly. Speaking of anti-Semitism. This concept is related to the Arabs, and certainly not to the Jews (the Semites are predominantly Arabs). There is another word for them: Judeophobia. Jews are smart, hardworking people. And yet, unlike us Russians, they do not give up their own people and help them in every possible way. So, before you blather, get some grammar, vour mother

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 02/11/2011

A businessman, a businessman, a gesheftmakher, a vile thief, in short, or a waiter!

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 02/11/2011

And what, you and a businessman have a dirty word? A person who organizes (literally) a business, work - is this a bad person in your opinion? Only loafers, drunkards, thieves and scammers can argue like that. See comment above (with the words Well, you ...)

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0)

by Guest on 07/11/2011

In the 15 years before the war (1924-1939), 9,500 plants and factories were built in the USSR, new technologies were developed, and the foundation was laid for the post-war leap into space and the development of atomic energy.

And what did your businessmen do for 20 liberal ideas in Russia? How many factory directors were built? What are the latest technologies put into operation? NOTHING! In addition to investments in shopping and entertainment centers, dealerships, etc. So while the term businessman in Russia has a negative meaning.

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0)

by Guest on 03/24/2012 all go to...

[Reply to this]

Re: TSAR-BOMB 50 YEARS (Total: 0) by Guest on 31/10/2013

In Russia, there is practically no "business" in the form that the word "business" is called. Well, this banal theft and spending the budget on various megaprojects, reselling Western equipment, products and rags in our stores, selling loans at sky-high interest rates and providing housing and communal services, which the state used to do, is not called business. Nothing new (technology, aircraft, equipment, etc.) was created by our unfortunate businessmen, they did not build a single normal plant, and not another assembly of Western Russian workers. What the hell is "business"? They simply eat up and operate what was built in the USSR. Only already in a personal pocket.

[Reply to this]

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